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Copy 8 of 8

1 April 1968

MEMORANDUM FOR THE RECORD

SUBJECT: Projected Flight Test Requirements, Sensors

1. U-2R nose with accommodations for T-35 tracker will be available for test during week starting April 8, 1968. Tracker tests will be conducted in conjunction with the testing of other sensor systems and may be employed in non sensor flight tests. Tracker film will be processed at Detachment G and will be carefully examined for evidence of vignetting and window condensation. System resolution will be determined from Edwards 3 bar targets and sample photography will be supplied to Perkin Elmer and NPIC for analysis. Three successful flights are required.

2. Delta III hatch will be available for flight test during week starting 29 April 1968. Three successful flights of four hours duration are required. Edwards 3 bar targets are to be covered at altitudes of [redacted] and urban coverage is to be obtained in cloud free areas. Aircraft is to be flown by autopilot and by hand, both straight and level and in turns. Effects of heater blower operation will be assessed. Flight test material will be processed at Det. G and resulting original negatives will be provided to Itek and NPIC for analysis.

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3. [redacted] will be available for test during week beginning 13 May 1968. Three successful flights are required, two night flights and one day flight of two hours duration at operational altitude. [redacted] is to be processed at Detachment G and analysis is to be made by Texas Instruments and NPIC. Targets are to be coastal areas (San Diego, Los Angeles or San Francisco).

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4. "H" camera hatch will be available for flight test during week beginning 20 May 1968. It is expected that 5 flights will be required to confirm aircraft sensor compatibility due to temperature and pressure sensitivity of the "H" system.

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Camera "on" time will be of 4 hours duration. Resolution targets will be recorded both on the flight track and at varying angles of obliquity. It is important to duplicate insofar as possible a typical mission in which heading changes are made every 6 to 8 minutes in order to establish time required for stabilization system to reach equilibrium. If the U-2R has better stability and vibration characteristics than the U-2C, better resolution may be obtained by using 3404 or SO-230 film instead of 3400.

5. Two months after approval is received for procurement of the optical bar panoramic cameras, flight tests can be started. It is anticipated that ten flights of varying durations from 2 to 5 hours would be required to establish system performance. It is estimated that this program would be started in August 1968 and continue through September.

6. The flight instrumentation package can be completed and ready for flight test four months after receipt of order. It is estimated that the order will be issued in April 1968. A six month flight test and data analysis program will start in August 1968. It is anticipated that twenty flights will be required to complete this series for all sensor systems extending over a six month period from August 1968 to February 1969. Specific flight tests will be identified and programmed during the assembly of the flight instrumentation package.

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